

NEW DESCRIPTIONS

TWO NEW SPECIES OF *MELINDA* ROBINEAU-DESVOIDY
(DIPTERA: CALLIPHORIDAE) FROM INDIA
WITH A KEY TO THE INDIAN SPECIES OF THIS GENUS¹DEVINDER SINGH^{2,3} AND INDERPAL SINGH SIDHU^{2,4}¹Accepted January 24, 2005²Department of Zoology, Punjabi University, Patiala 147 002, Punjab, India.³Email: devinder_ss@india.com⁴Email: inderpalsidhu76@yahoo.co.in

Two new species of *Melinda*, *M. chambaensis* sp. nov. and *M. chandigarhensis* sp. nov. are described from India. A key to the five species of this genus known from India is given.

Key words: *Melinda*, Diptera, Calliphoridae, new species

INTRODUCTION

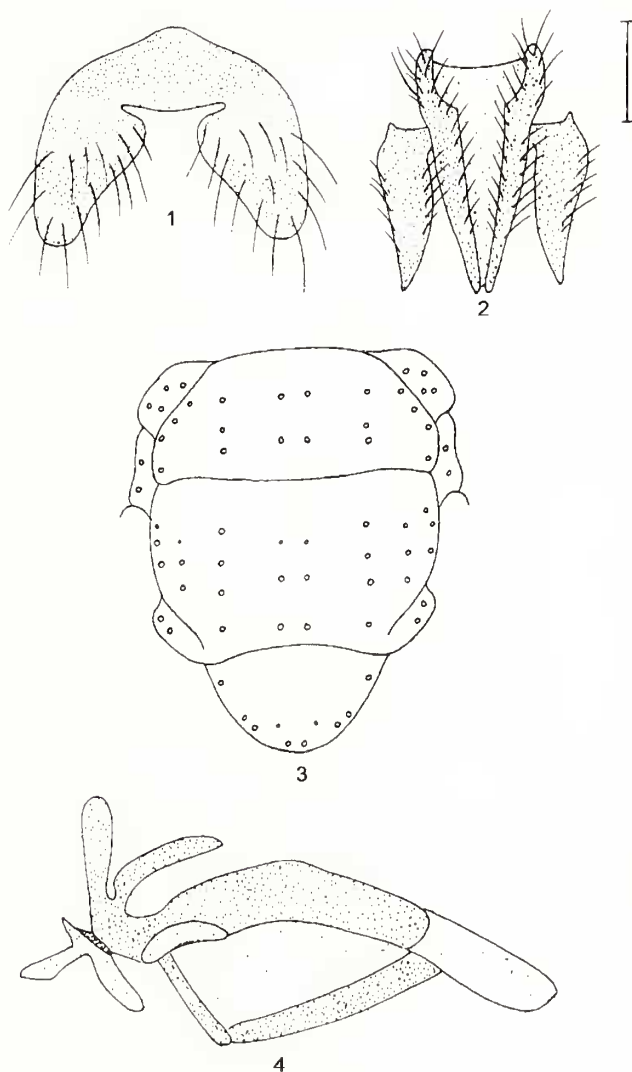
The genus *Melinda* is represented by 26 species from the Oriental region, including three from India. There has been some controversy regarding the taxonomic status of this genus and that of *Paradichosia* Senior-White. Senior-White *et al.* (1940) kept them as distinct genera while Kurahashi (1970) synonymised the two. Because Fan *et al.* (1992) again assigned them independent status, we consulted Dr. Kurahashi (pers. comm.), who is of the firm opinion that *Paradichosia* should be considered a junior synonym of *Melinda* and we agree.

Melinda chambaensis sp. nov.

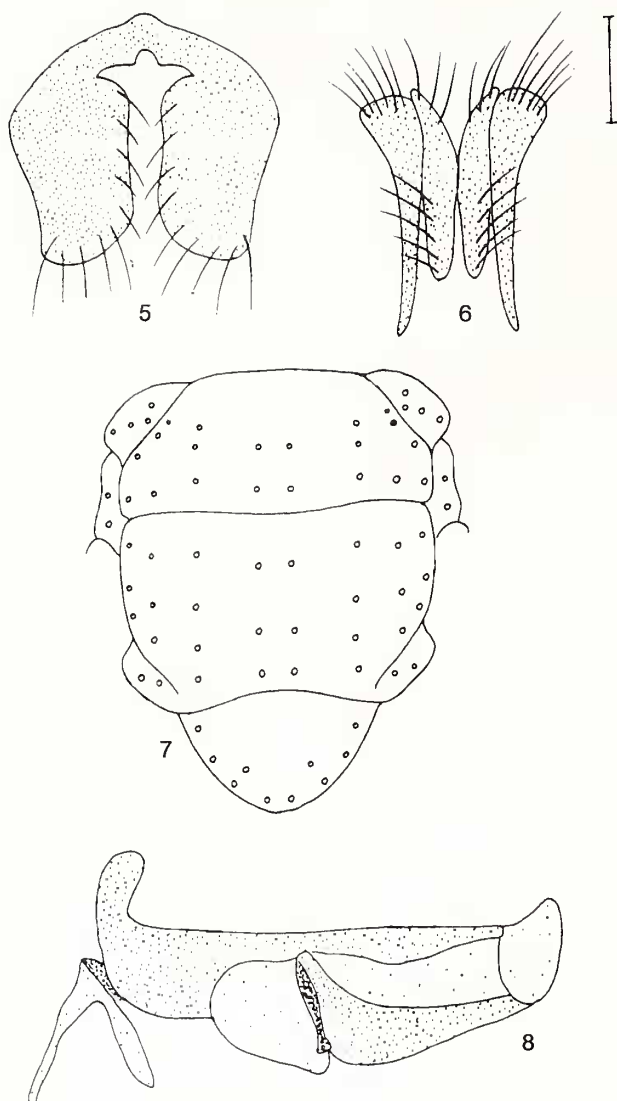
(Figs 1-4)

Male: Body length 13.0-13.5 mm.

Head: Eyes bare, subholoptic, facets uniform; ptilinal angle strongly projecting; frons dark brown, triangular, gets narrow as it approaches vertex; parafrotaia greyish, narrower than frons; frontal bristles well developed; fronto-orbital bristles absent; ocellus with weak ocellar bristles and strong postvertical bristles; vertical bristles weak, prevertical and outvertical bristles absent; parafacialia and face greyish with silver tinge; facial carina very strong; epistome grey; medianae and jowls dark brown, golden dusted, hairy; genae and postgenae greyish black with black and golden hair; vibrissae present just above oral margin; persitomal bristles well-developed; postorbit golden with golden tomentum; occiput greyish, covered with golden and black hair; 1st antennal segment brown, 2nd segment dark brown with black setulae, 3rd segment black and its length only 1.5x that of 2nd; arista black, long plumose; palpi black with bristles present all over.

Thorax: Black, strongly golden dusted with darkFigs. 1-4: *Melinda chambaensis* sp. nov.

1. Fifth sternite of male (Magnification line = 0.5 mm);
2. Cerci and paralobi (Magnification line = 0.25 mm);
3. Dorsal view of chaetotaxy of thorax (Diagramatic);
4. Aedeagus and parameres (Magnification line = 0.17 mm)



Figs. 5-8: *Melinda chandigarhensis* sp. nov.

5. Fifth sternite of male (Magnification line = 0.4 mm);
 6. Cerci and paralobi (Magnification line = 0.29 mm);
 7. Dorsal view of chaetotaxy of thorax (Diagrammatic);
 8. Aedeagus and parameres (Magnification line = 0.15 mm)

longitudinal stripes beyond transverse suture; humerus golden dusted; postalar callus brown with golden dusting; prothoracic spiracle brown; propleuron greyish with golden dusting, hairy; prosternum hairy; post-alar declivity bare; supraspiracular convexity bare; suprasquamal ridge with anterior tuft.

Chaetotaxy (Fig. 3): Acrostichals 2+3; dorsocentrals 3+4; intra-alars 0+3; presutural present; humerals 4; posthumerals 3; supra-alars 3; post-alars 2; notopleurals 2; lateroscutellars 3; apicoscutellar and discoscutellar 1 each; sternopleurals 2+1; propleural and prostigmatic present.

Wings: Hyaline, with yellowish tinge; veins brown; stem vein (R) bare; R_1 bare; R_{4+5} black, setulose at basal node on

both dorsal and ventral sides; first posterior cell (R_5) open; epaulet and basicosta black; alar and thoracic squamae brownish yellow; thoracic squama rounded at apex with soft white hair at margin while bare dorsally; halteres yellow.

Legs: Black; fore- and hind-femora with bristles on both dorsal and ventral sides while mid-femur with bristles on dorsal side only; fore- and mid-tibiae with two bristles at middle and three at apex; hind-tibia with two bristles at middle and one at apex.

Abdomen: Black patched with golden dusting; tergite 2 darker than others, tergites 2 and 3 with weak marginal bristles present at lateral side, tergites 4 and 5 with strong marginal bristles; sternites 1-5 with long black hairs.

Genitalia: Fifth sternite (Fig. 1), Cerci and paralobi (Fig. 2), Aedeagus and parameres (Fig. 4).

Female: Unknown.

Holotype: Male, Himachal Pradesh: Chamba-996M, 22.ix.2000, Coll. Inderpal Singh Sidhu.

Paratypes: (2♂♂) Himachal Pradesh: Chamba-996M (1♂) 21.ix.2000; Kandi -2355M (1♂) 14.ix.2000. Coll. Inderpal Singh Sidhu.

Distribution: Himachal Pradesh, India.

Remarks: This new species is closely related to *M. pusilla pusilla* (Villeneuve). However, it is separated from the latter on the basis of following combination of characters: frons dark brown (orange in *pusilla pusilla*); antennae and palpi dark brown to black (orange in *pusilla pusilla*); first posterior cell (R_5) open (closed in *pusilla pusilla*); basicosta black (yellow in *pusilla pusilla*); legs black (testaceous in *pusilla pusilla*).

Etymology: The species name has been derived from the name of the type locality.

Melinda chandigarhensis sp. nov.
 (Figs 5-8)

Male: Body length 7.5 mm

Head: Eyes hairy, subholoptic, facets uniform; ptilinal angle strongly projecting; frons reddish brown, narrower than parafrontalia; parafrontalia brownish, hairy; frontal bristles well-developed; fronto-orbital bristles absent; ocellus with weak ocellar and postvertical bristles; vertical and outervertical bristles absent, prevertical bristles present; parafacialia orange with brownish tomentum, bare; face brownish; facial carina present; epistome yellowish; medianae reddish brown, bare; jowls and genae greyish brown with black hair; postgenae brownish, with intermixed black and pale hair; vibrissae present well above oral margin; peristomal bristles well-developed; postorbit greyish with golden tomentum, bare; occiput greyish, covered with black and

pale hair; antennae dark brown, length of 3rd segment about 4.5x that of 2nd; arista brown, long plumose; palpi black with bristles present all over.

Thorax: Shining black with purplish tinge, with dark longitudinal stripes; humerus concolorous with dorsum; postalar callus brown; prothoracic spiracle brown; propleuron and prosternum bare at centre and hairy at margins; postalar declivity and supraspiracular convexity bare; suprasquamal ridge with anterior tuft.

Chaetotaxy (Fig. 7): Acrostichals 2+3; dorsocentrals 3+4; intra-alars 1+3; presutural present; humerals 4; posthumeral 3; supra-alars 3; post-alars 2; notopleurals 2; lateroscutellars 3; apicoscutellar and discoscutellar 1 each; sternopleurals 2+1; propleural and prostigmatic present.

Wings: Hyaline; veins brown; stem vein (R) bare; R₁ bare; R₄₊₅, setulose at base on both dorsal and ventral sides; first posterior cell (R₅) open; epaulet and basicosta brown; subcostal sclerite with fine pubescence; alar and thoracic squamae dirty yellow, bare, with yellow marginal cilia; both squamae bare on dorsal surface; halteres brown.

Legs: Brownish; fore- and hind-femora with bristles on both dorsal and ventral sides and mid-femur with bristles on ventral side only; tibiae with series of bristles.

Abdomen: Tergites 2 and 3 light brown, black in middle, with decumbent marginal bristles; tergites 4 and 5 dark brown with series of strong marginal bristles; sternites 1-5 with long black hair.

Genitalia: Fifth sternite (Fig. 5), Cerci and parolobi (Fig. 6), Aedeagus and parameres (Fig. 8)

Female: Unknown.

Holotype: Male, Chandigarh-300M 20.viii.2002. Coll. Inderpal Singh Sidhu.

Distribution: Chandigarh, India.

Remarks: Because of hairy eyes, this new species comes near *M. abdominalis* Malloch and *M. scutellata* Senior-White. It can be separated from *M. abdominalis* by the following combination of characters: parafrofrontalia and face brownish without dusting (with silver grey dusting in *abdominalis*); palpi black (yellow in *abdominalis*); antennae dark brown (reddish in *abdominalis*); postalar declivity bare

(setulose in *abdominalis*). The following characters separate it from *M. scutellata*: facial carina present (absent in *scutellata*); ptilinal angle strongly projecting (not projecting in *scutellata*); antennae dark brown (orange in *scutellata*); length of 3rd antennal segment 4.5x that of 2nd (3x in *scutellata*); dorsocentrals 3+4 (2+3 in *scutellata*); humerals 4 (3 in *scutellata*); posthumeral 3 (2 in *scutellata*); post alar declivity bare (hairy in *scutellata*); basicosta brown (yellow in *scutellata*); squamae yellow (dark brown in *scutellata*).

Etymology: The name of this species has been derived from the type locality.

KEY TO THE INDIAN SPECIES OF GENUS *MELINDA*

1. Eyes hairy; legs orange to brownish; epaulet and basicosta yellowish to brown; facial carina absent or weak 2
- Eyes bare; legs black; epaulet and basicosta black; facial carina very strong *M. chambaensis* sp. nov.
2. Presutural intra-alar present; length of 3rd antennal segment at least 3x that of 2nd; sternopleural hair black; first posterior cell (R₅) open 3
- Presutural intra-alar absent; length of 3rd antennal segment 2x that of 2nd; sternopleural hair yellowish; first posterior cell (R₅) closed *M. pusilla indica* (Kurahashi)
3. Facial carina absent; ptilinal angle not projecting; length of 3rd antennal segment 3x that of 2nd; dorsocentrals 2+3; humerals 3; post-alar declivity hairy 4
- Facial carina present; ptilinal angle strongly projecting; length of 3rd antennal segment 4.5x that of 2nd; dorsocentrals 3+4; humerals 4; post-alar declivity bare
..... *M. chandigarhensis* sp. nov.
4. Posthumeral 3; palpi yellow; scutellum entirely yellow; tergites 2-3 yellow with brownish hind margins; squamae orange *M. abdominalis* Malloch
- Posthumeral 2; palpi orange; scutellum black with apex yellow; tergites 2-3 greyish black; squamae dark brown *M. scutellata* Senior-White

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